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QUALITY ASSURANCE AND UK-SPEC – AVOIDING 'THEM AND US'

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INTRODUCTION

The new procedures for accreditation of engineering courses in the UK (UK-SPEC) are based on detailed requirements in the form of learning outcomes or 'output standards' and raise some interesting issues.

Some of the issues are to do with the scrutiny of courses and of the achievements of students and staff, and can be seen as part of the wider 'quality debate' in which many academics are hostile to the methods and motivation of those who seek to impose quality assurance systems. The paper explores these perspectives, and those that oppose them.

The other main issue is to do with the relationship between individual subject lecturers and the system within which they work.

The perspective that gives the most satisfying resolution to the debate about quality assurance and also gives a helpful representation of the relationship between the individual lecturer and the system that includes quality assurance and accreditation, is the use of the term 'structure' as promoted by the sociologist Anthony Giddens.

The paper explores the 'structure' within which we work and demonstrates how understanding it can avoid 'them and us' attitudes to quality assurance and accreditation within engineering courses.

PERSPECTIVES ON QUALITY

I first consider published perspectives on quality assurance in higher education (not specifically related to engineering).

Many perspectives on quality assurance incorporate the concept of *risk*. McWilliam(1) offers the framework that 'all contemporary organizations, including universities, are risk organizations. This is because all organizations must, of necessity, focus on guarding themselves against the possibility of failure . . . For a university, this means guarding against the danger of waste (of resources), of failure (of students), of declining standards (intellectual, ethical and moral).' In the specific context of accreditation of engineering degrees, we could add to this list the danger that engineering graduates will not be professionally competent.

Morley(2) states that 'one of the emerging functions of higher education has become the aversion to risk.' Her feelings about this quickly become apparent. 'Like other neoliberal discourses, for example choice and consumer empowerment, quality assurance appears to be client-focused and democratizing, whereas it has deeply conservative underpinnings.' Morley comments on 'the group of people from which the pool of peer assessors, quality assurance officers and managers is drawn. This group can be driven by paradoxical and contradictory aims. On the one hand, they subscribe to processes that are profoundly undemocratic and authoritarian. On the other hand, there is a democratizing driver. They want a better deal for students – more information, product specification and risk-reduction in a knowledge-driven economy. The values of the consumer society are now firmly embedded in educational relationships.'

Smeyers and Hogan(3) give a more optimistic presentation of the same side of the argument, essentially presenting risk in education as a good thing. 'Perhaps the risks of education that are most worth taking are those that humanely bring to light undetected but invidious preconceptions and that enable learning in any field to proceed as a distinctively human endeavour with a perceptive sense of its own possibilities and limitations.'

The alternative view, in the form of a robust defence of quality assurance systems in higher education, and regret they do not go further, is given by Randall(4). 'Both students

and employers, the main users of the higher education system, need to have confidence that qualifications attest accurately to past achievements and current ability.' Randall predicts that 'the combination of circumstances that gave rise to complaints about financial products that failed to live up to expectations could easily give rise to similar complaints about investments in higher education that failed to deliver what the user expected . . . Many young parents will now be investing to meet the costs of the higher education that their children will be entering in ten or fifteen years' time. It would be ironic if their savings schemes turned out to provide more effective and transparent safeguards and better public information than the higher education those savings are intended to purchase.'

Commenting on reluctance in higher education towards further development of quality assurance systems, Randall feels that 'that reluctance is a symptom of an attitude that puts the interests of the providers above those of the users . . . For too long the providers of higher education have behaved like princes of all they survey. It is time for the consumer to be king.'

UNIVERSITIES AND EMPLOYER INTERESTS

Some commentators emphasise the value and importance of universities which are genuinely *independent* (though the examples generally come from the past). Describing the establishment of the University of Virginia, Smeyers and Hogan(3) quote from a letter by Thomas Jefferson: 'this institution will be based on the illimitable freedom of the human mind. For here we are not afraid to follow truth wherever it may lead, nor to tolerate any error so long as reason is left to combat it'. This emphasis 'clearly distinguishes the enduring interests of *education* from the interests of politics, or religion, or commerce'(3).

Referring to the ways in which universities are having to respond to employer interests, Land(5) states: 'In order to compete successfully within a globalized economy, there are pressures for the higher education (HE) curriculum to become more vocational, for HE to be more closely linked to the needs of a global economy and employability needs.' Later he describes possible problems that may arise in consequence: 'Employability remains for many academics, however, a discourse that is located outwith their discipline . . . a form of troublesome knowledge, an alien discourse . . .'

Employer interests are referred to by most writers on quality assurance, including those quoted from above. Morley(2) points out that 'while higher education is largely dependent on state funding, it is expected to meet the requirements of the private sector economy. Increasingly, higher education is being framed as a source of labour market training. There is a more explicit concern with universities producing new workers.' Later she comments on the important fact that 'professional knowledge has become unstable. The old notion of banked knowledge, whereby professionals acquire a body of knowledge in their youth and then practise throughout their careers, is changing. There is increasing emphasis on disposable, transferable and just-in-time knowledge.'

Randall, as might be expected, emphasises the responsibilities of universities to satisfy employers' needs. 'There are two categories of user whose requirements must be considered. The first comprises actual and potential students and their families; the second comprises employers, professional bodies and all of those concerned with the mix of skills required in a modern economy . . . Employer interests will be concerned with abilities of graduates to perform effectively in a variety of roles. Some will seek occupationally specific skills … Most will seek more general abilities, particularly the problem-solving skills that are transferable to many contexts … For the employer interests, it is standards of both general and specific competence that matter.' (Randall[4])

PERSPECTIVES ON ACCREDITATION

In what ways are the perspectives given above, on quality assurance and the involvement of employer interests, relevant to the new Engineering Council (UK) requirements for accreditation of engineering

courses as set out in UK-SPEC (Engineering Council[6])?

UK-SPEC could certainly be seen as a way of guarding against risk. It attempts to guard the engineering profession against the risk of employing graduates who are professionally incompetent. To some extent it guards universities against the risk of giving degrees to graduates who might become a liability to their employers, and therefore guards universities against the risk of developing a bad reputation in the industry. Indeed if professional knowledge is unstable, as observed by Morley, perhaps academics should see UK-SPEC not as an imposition but as a reassuring guarantee: the industry helpfully saying to academics, 'teach this and everyone's happy'. In a sense, the Engineering Council is accepting responsibility for this risk and protecting universities.

On the other hand UK-SPEC clearly raises issues about the independence of universities. The acronym itself implies that it represents the industry's specification (detailed set of requirements), for the universities' products (graduates). It implies that graduates whose education does not comply precisely with this specification will be treated by the industry with the same dismissiveness as a component received from a supplier that is 'out of spec'. This can be seen as challenging the ideal state of independence of a university, though perhaps that should not be taken too far. No one would imply that UK-SPEC attempts to pervert truth in some way. At its worst it might stunt educational ambition by limiting the options of academics, in terms of content and approach. And it should be pointed out that no engineering academic should find employability an 'alien discourse', in the way Land(5) considers some academics might.

John Randall would see UK-SPEC as very consistent with his vision. Even the format of the learning outcomes specified (general learning outcomes and specific learning outcomes in engineering) mirrors his 'standards of both general and specific competence'.

A further important perspective is the relationship between the individual lecturer and the system that includes quality assurance and accreditation, in the context of implementing UK-SPEC. I consider this next.

IMPLEMENTING UK-SPEC

The learning outcomes in UK-SPEC must ultimately be achieved at the level of the whole course. Yet student learning is facilitated by lecturers within individual subject units – 'modules' as they are termed at most universities. Of course student learning may actually take place at the level of the course; for example when a student is working on a project she may find herself integrating knowledge from different modules. But the 'delivery' of content, and even the creation of learning experiences that encourage integration of knowledge, all reside within discrete modules.

Modules may be delivered by one or more lecturers, but ownership of module design rests with one member of staff – often termed the 'module leader'. The module leader is a member of the group who collectively deliver the course as a whole. It is clearly desirable for module design by the module leader to be influenced by discussions at group level, and the process must be steered to some extent by the manager of the course or of the group. But the changes that must be made to a course in order to comply with UK-SPEC will ultimately be made by individual module leaders working on the content of individual modules.

Therefore the relationships between individual members of staff, the group of staff, and the system within which they work, are important and interesting. It is helpful to borrow some concepts from sociology on the relationship between individual action, or agency, and overall structure.

AGENCY AND STRUCTURE

The British sociologist Anthony Giddens 'claims that structure and action are two sides of the same coin. Neither structure nor action can exist independently; both are intimately related. Social actions create structures, and it is through social actions that structures are produced and reproduced . . .' (Haralambos and Holborn[7])

Element of structure	Mechanisms
Module descriptor	Module leader's ideas and reflection
Teaching and assessment norms	Interaction between lecturers: informal, formal within an institution (observation, moderation); subject centre workshops, international conferences
Internal quality assurance	As peer reviewers, panel members
Student feedback	By anticipating/responding
External examiners	By 'educating' externals; by acting as externals elsewhere
Modular system	By providing feedback on operation, and proposing changes
Programme specification	Via group discussion and changes to modules
QAA; Benchmark statement	By providing feedback on experiences, lobbying via groups of senior academics; by particular interpretation
Accreditation visits; UK-SPEC	By membership of panels or lobbying those who are members of panels; by particular interpretation

Table 1: Interaction between individual action and the structure

In this sense, the 'structure' is not an imposed system within a 'them and us' world. 'It is agents who bring 'structure' into being, and it is 'structure which produces the possibility of agency.' 'Structure is both enabling and constraining.' (Cassell[8])

An important concept is the 'duality' of structure in the sense that 'the structural properties of social systems are both the medium and the outcomes of the practices that constitute those systems'. (Giddens [9]) 'The 'duality' of structure consists in structure's two-sided existence – as both the medium and the unintended outcome of social practice.' (Cassell[8])

The example that is commonly given is related to language. When we speak, we are making use of the conventions of language, yet through use of language individual speakers may cause those conventions to change over time. An example more closely related to higher education might be assessment. When we give a piece of work 60%, we are complying with a structure that guides the determination of marks, yet through our own marking practice and the debates we have with colleagues whose marks we are moderating, we may also be confirming the structure, or perhaps developing it, or even challenging it. A mark is only given to work of a particular quality because, at that time, some 'structure' of mutual understanding condones it.

So in higher education what is the 'structure' in its entirety? It is not just (for example) the modular system, or the course learning outcomes, or the requirements of accreditation. It includes many other enabling and constraining factors including all shared understanding about good practice. Good practice in engineering education must include relevance to industry, and the individual lecturers (the agents) need a system, or a component within the 'structure', to enable this (UK-SPEC perhaps).

We would not be making proper use of these ideas if we simply defined this structure as UK-SPEC by itself. But perhaps we would be making proper use of the concepts if we used a fuller definition: that the structure consists of the entire enabling and constraining system, including peer-moderated good practice, quality assurance procedures, UK-SPEC, student questionnaire feedback, and so on.

This is developed more fully in the next section.

An example of interaction between agents and structure in this case is the fact that academics have influenced the development of UK-SPEC, and will be heavily involved in its 'imposition' and 'policing' by their membership of visiting accreditation panels.

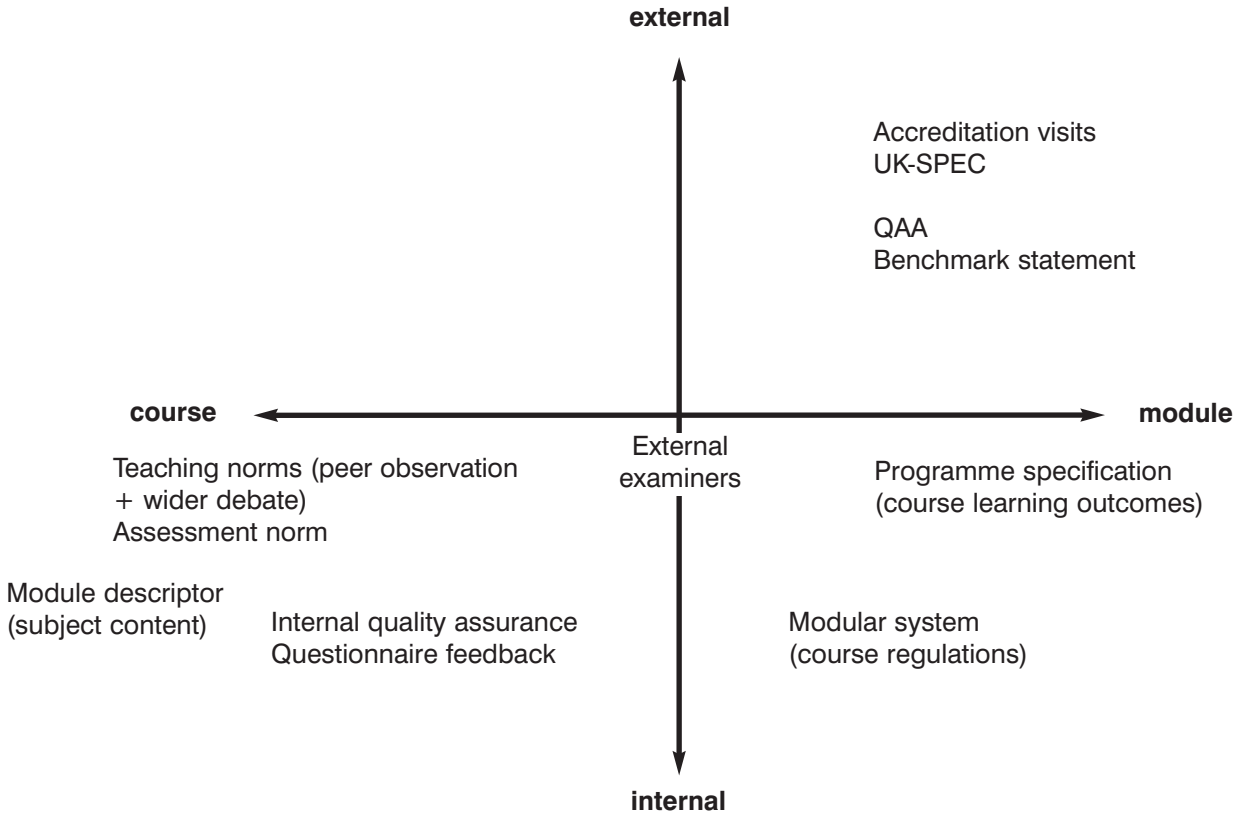

Figure 1: The 'structure'

THE 'STRUCTURE'

I attempt to represent this structure as a whole in **figure 1**.

This is an attempt to represent the system as fully as possible. It includes both academic quality assurance and professional accreditation, set out on an ***internal–external*** axis. The relationship between the individual lecturer and the group is represented by the axis that is equivalent in delivery terms: the ***module–course*** axis. Some sense of scale (as opposed to a simple binary split) is intended along both axes.

How do the elements of this structure display Giddens' 'duality', in which 'the structural properties of social systems are both the medium and the outcomes of the practices that constitute those systems'? The likely mechanisms of interaction between the individual and the structure are given in **table 1**. For some elements the interactions between individual action and the structure are more immediate than for others, and this is confirmed by the layout of **figure 1**. But we should remember the classic example of duality related to language, given in section 7: when we speak, we are making use of the conventions of language, yet through use of language individual speakers may cause those conventions to change over time. However every time we speak we do not transform the rules of language at a stroke. The effect may be very gradual, and, to fully comply with the Giddens concept, unintended.

CONCLUSIONS

In my view it is self-evident that 'them and us' simplifications cannot be the basis of a healthy attitude towards quality assurance in higher education. For example the opinions of Morley(2) given earlier seem to go beyond simple concern about the impact of quality assurance systems, to suggest an almost personal animosity towards those that volunteer to become involved in the processes as peer assessors. In the same section, the language of Randall(4), promoting tighter procedures than those that currently exist, also seems unhelpful. The last thing we need is for quality assurance in higher education to

be depicted as a contest between the interests of academics and those of the 'consumers'.

I feel that the definition and exploration of 'structure' given in the paper provides a satisfying resolution to this debate.

This 'structure' also gives a helpful representation of the relationship between the individual subject lecturer and the system that includes quality assurance and accreditation. The concept that the structure is both enabling and constraining is particularly relevant. UK-SPEC is intrusive (constraining) because it is prescriptive about content (in the form of learning outcomes at least), but, as has been stated, good practice in engineering education must include relevance to industry and in this context UK-SPEC is enabling. As I have suggested, this could even be interpreted as the Engineering Council taking away from universities some responsibility for the risk that engineering graduates will not be well prepared for their careers.

Engineering departments all over the UK are adapting their courses to comply with UK-SPEC. Steered by discussion with colleagues and coordinated by those responsible for management of the course and of the group, the main changes will be made by individual lecturers working on the content of individual modules. Their work will be enabled and constrained by a system or 'structure' that includes UK-SPEC but also contains many other elements including all shared understanding about good practice. The structure exhibits a 'duality' in which the structural properties of the system are both the medium and the outcomes of the practices that constitute the system. For some elements the interaction between individual action and the structure is more immediate than for others. The representation on Figure 1 suggests that UK-SPEC lies in the part of the structure that is most remote from the influence of the individual lecturer but is nonetheless still part of an overall enabling (and constraining) structure.

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